

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) Publication number:

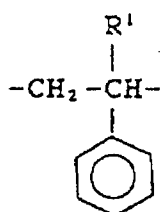
0 588 287 A3

(12)

EUROPEAN PATENT APPLICATION(21) Application number: **93114693.0**(51) Int. Cl.⁵: **C08L 21/00, C08K 3/04,
C08C 19/44**(22) Date of filing: **13.09.93**(30) Priority: **18.09.92 JP 275105/92**(43) Date of publication of application:
23.03.94 Bulletin 94/12(84) Designated Contracting States:
DE FR GB IT(88) Date of deferred publication of the search report:
22.06.94 Bulletin 94/25(71) Applicant: **KURARAY CO., LTD.**
1621 Sakazu
Kurashiki-City(JP)(72) Inventor: **Ishiura, Kazushige**
98, Ohta,
Hasaki-cho**Kashima-gun Ibaraki-pref.(JP)**Inventor: **Takamatsu,Hideo****167-55, Miyatsudai,****Kashima-cho****Kashima-gun, Ibaraki-pref.(JP)**Inventor: **Yamada, Tsutomu****5-1-34, Shitte,****Kamisu-cho****Kashima-gun, Ibaraki-pref.(JP)**Inventor: **Ogawa, Atsuhisa****5-1-34, Shitte,****Kamisu-cho****Kashima-gun, Ibaraki-pref.(JP)**(74) Representative: **Müller-Boré & Partner**
Patentanwälte
Isartorplatz 6
D-80331 München (DE)(54) **Rubber composition.**

(57) A rubber composition having excellent processability and improved dispersion state of carbon black containing:

a functional group-containing polymer having a number average molecular weight of 1,000 to 100,000 and comprising 0 to 60 mole% of a structural unit represented by the formula (1) and 100 to 40 mole% of a structural unit represented by formula (2) plus a structural unit represented by formula (3), the polymer having on one end of its molecule an average at least 0.6 group per molecule of a group represented by formula (4), a hydroxyl group or an amino group;



(1)

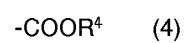
wherein R¹ represents a hydrogen atom or a methyl group,**EP 0 588 287 A3**



wherein R² represents a hydrogen atom or a methyl group,



wherein R³ represents a vinyl group or an isopropenyl group;



wherein R⁴ represents a hydrogen atom or an alkali metal;
a solid rubber and
carbon black.



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 93 11 4693

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
X	DD-A-219 201 (CHEMISCHE WERKE BUNA) 27 February 1985 * page 2, line 12 - line 22 * * page 4, line 1 - line 33 * * claims; example 2 * ---	1-4	C08L21/00 C08K3/04 C08C19/44
X	EP-A-0 178 752 (CAMERON IRON WORKS) * page 3, line 3 - page 5, line 18 * * page 6, line 21 - line 22 * * claims; table IV * ---	1-4	
X	DATABASE WPI Section Ch, Week 7506, Derwent Publications Ltd., London, GB; Class A, AN 75-09956W & JP-A-49 115 137 (KURARAY CO. LTD.) 2 November 1974 * abstract * -----	1-4	
			TECHNICAL FIELDS SEARCHED (Int.Cl.5)
			C08L C08C
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 15 April 1994	Examiner Mettler, R-M
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			